

West Michigan Transportation Operations Center

Serving Motorists on West Michigan Freeways

www.michigan.gov/its

www.michigan.gov/drive

Fiscal Year 2011



Suzette Peplinski, P.E.
1420 Front Avenue NW
Grand Rapids, MI 49504
PeplinskiS@michigan.gov

West Michigan TOC Control Room
E-mail: MDOT-GR-TRAFFOPS@michigan.gov
Main: 616-451-8329
Fax: 616-774-9101

In the Spotlight

Every year, West Michigan Transportation Operations Center (WMTOC) control room operators monitor locations throughout West Michigan known as "hot spots" - areas where crashes happen more frequently - in order to provide information to first responders, motorists and other stakeholders as quickly as possible. In Fiscal Year (FY) 2011, the top five hot spots included:

- US-131/Wealthy Street interchange
- US-131/Franklin Street interchange
- US-131/Burton Street interchange
- I-196/Lane Avenue interchange
- I-196/Lake Michigan Drive interchange

These hot spots accounted for 200 crashes, over one-third of the 588 total crashes documented in FY 2011 by WMTOC control room operators.

In addition to driver behavior, winter weather can play a major role in crashes. According to the National Weather Service (NWS), four notable weather events occurred during the months of December and February in FY 2011, which corresponds to an increase in monthly incidents between October and February in FY 2011 compared to FY 2010. WMTOC control room operators work with partners, including the NWS, to keep motorists informed of changing weather patterns.

Compiled by:
URS



Control Room Hours of Operation

Time Period	Days	Hours
October – April	Monday – Friday	6 a.m. – 8 p.m.
	Saturday – Sunday	As needed
May – September	Monday – Thursday	6 a.m. – 8 p.m.
	Friday	6 a.m. – 9 p.m.
	Saturday	Noon – 6 p.m.
	Sunday	4 – 8 p.m.
Special Events	All	As needed
Holidays and Holiday Weekends	New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving, Christmas	As needed

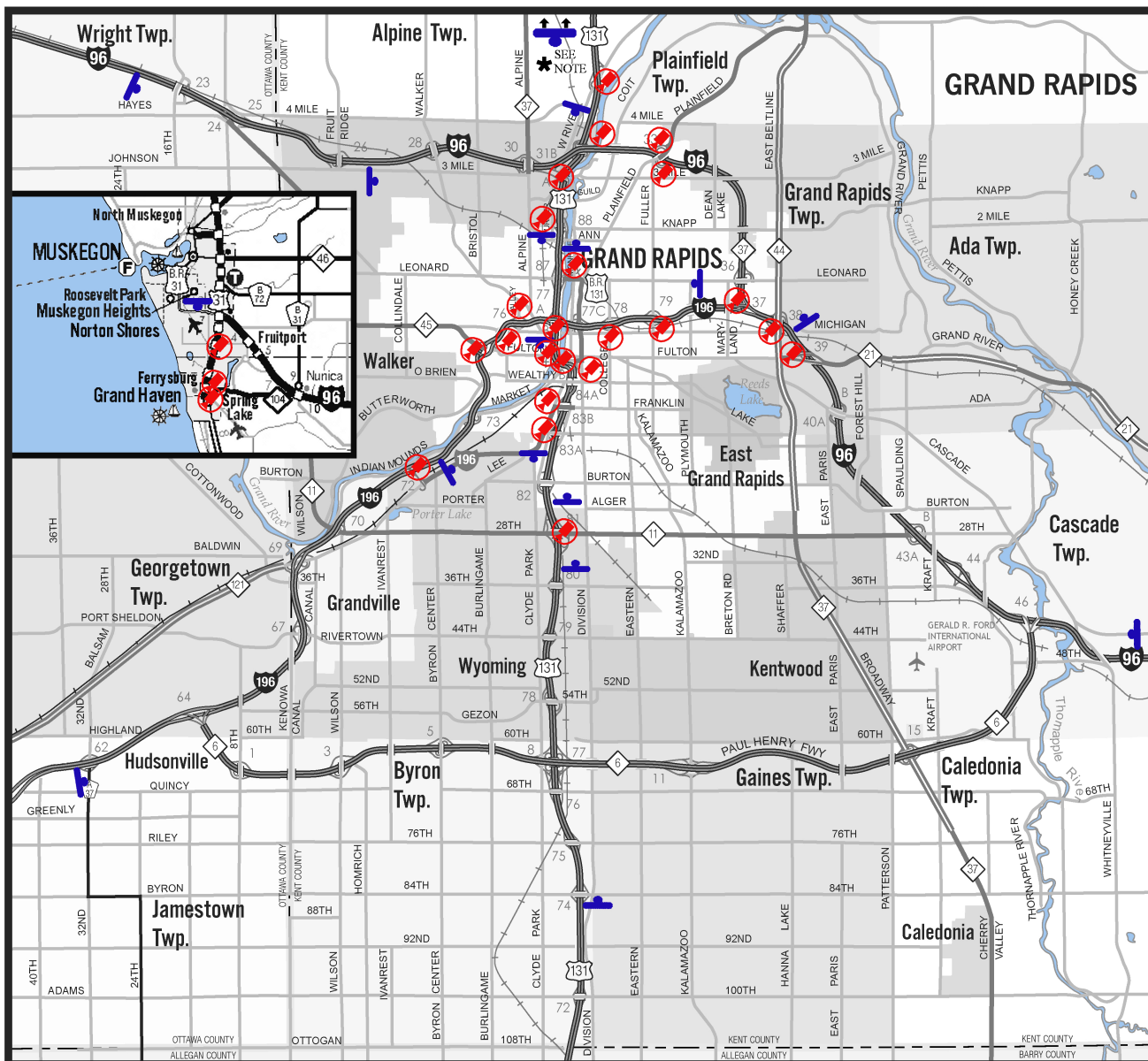
Control Room Contact Information

E-mail: MDOT-GR-TRAFFOPS@michigan.gov
 Main: 616-451-8329
 Fax: 616-774-9101

PLEASE NOTE:

The following report is limited to data collected within the ITS device coverage area during control room operation hours.

ITS Device Locations and Coverage Area



* DMS on South US-131 at Rockford Rest Area

Key: Closed-circuit Television Camera
 Dynamic Message Sign

Summary

Data Key

FY 2011

Communications Activity



Operators log all incoming and outgoing control room communications, engaging various incident responders and stakeholders.

Total Communication

Calls: 2,650
Emails: 2,346

Quality Assurance/Quality Control



Quality assurance and quality control audit of format and content for incident notification communication and media traffic reporting.

Incident Notification

Format Correct 98.1%
Content Correct 96.1%

Unplanned Incidents



Operators log information about each unplanned incident* including date/time, location, traffic impact, duration, and associated traveler information.

Total Incidents

1,099

Construction Activity



Operators maintain a list of ongoing construction projects and contacts for these projects. This activity also includes maintenance operations.

Incidents Occurring in Construction Zones

35

Daily Shift Report



Operators track maintenance issues for all Intelligent Transportation Systems (ITS) equipment, including Closed-circuit Television (CCTV) cameras, Microwave Vehicle Detector Systems (MVDS), Dynamic Message Signs (DMS), and Variable Speed Signs (VSS).

System Availability

CCTV: 90%
MVDS: 74%
DMS: 98%
VSS: 98%

***Incidents** include, but are not limited to, vehicle crashes, abandoned or disabled vehicles, and debris in the roadway.

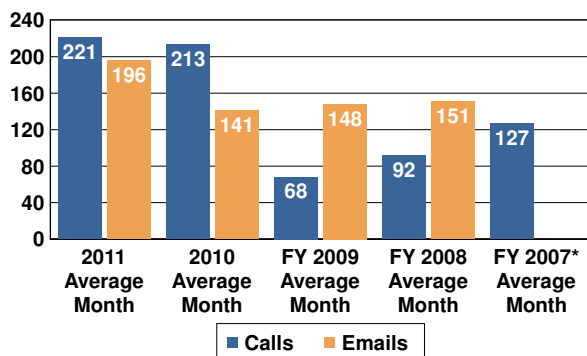
Note: Data included in this report is from MDOT FY 2011 (October 1, 2010 through September 30, 2011)

Communications by Agency



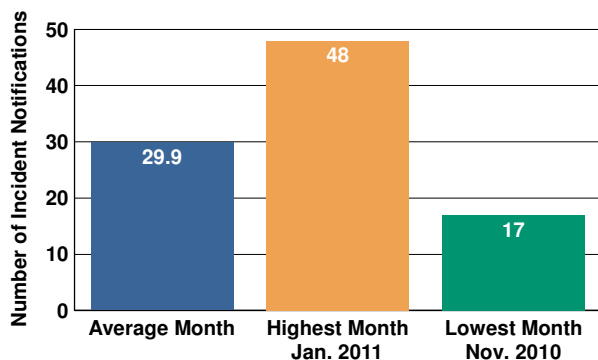
Agency	Calls			E-mails		
	In	Out	Total	In	Out	Total
City of Grand Rapids	5	4	9	273	0	273
Grand Rapids Police Department	71	702	773	0	0	0
ITS System Maintenance	85	126	211	86	21	107
Kent County Road Commission	60	41	101	0	0	0
Kent County Sheriff	10	10	20	0	0	0
Listserv (Traffic Notifications)	0	0	0	285	142	427
MDOT, Construction	81	84	165	221	19	240
MDOT, Maintenance	50	81	131	25	5	30
MDOT, Other	41	34	75	309	13	322
MDOT, Traffic/ITS	27	12	39	160	44	204
Media	98	21	119	47	156	203
Michigan State Police	72	419	491	1	20	21
Other	107	50	157	89	4	93
URS Corporation	228	131	359	70	31	101
Weather	0	0	0	324	1	325
Annual Total	935	1,715	2,650	1,890	456	2,346

Annual Average Communication History



*E-mail data not available for FY 2007.

Incident Notification* History



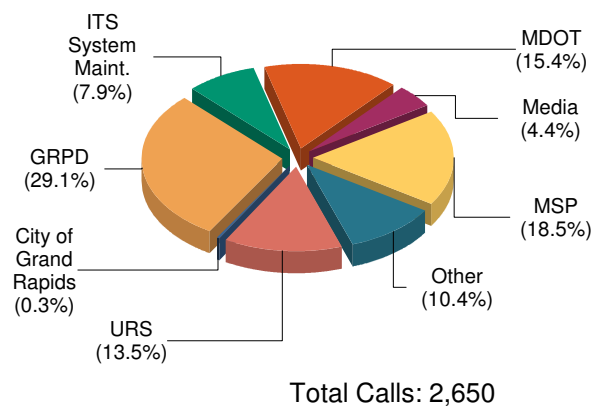
Incident Notification* Communication Accuracy



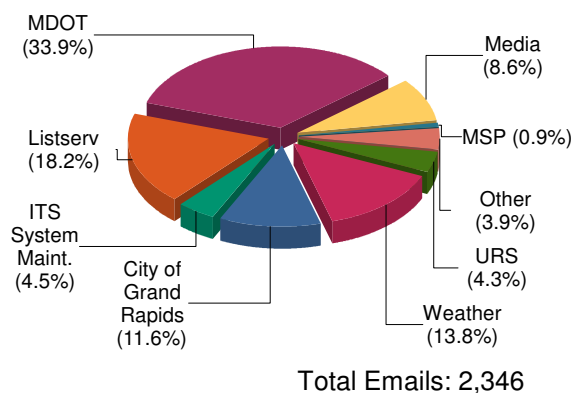
	FY 2011 Average	FY 2010 Average
Format Correct	98.1%	97.5%
Content Correct	96.1%	94.1%

*Incident Notification e-mails are issued for high-impact incidents with an expected duration of 15 minutes or greater. To subscribe to this list, please visit the MDOT listserv by following this link.

Calls by Type



E-mails by Type



DMS and VSS Messages by Type



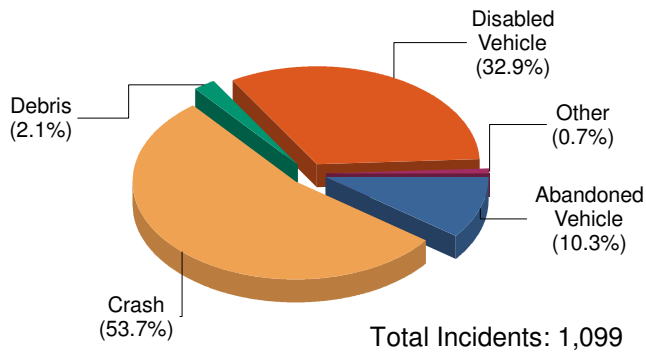
Most Utilized DMS*



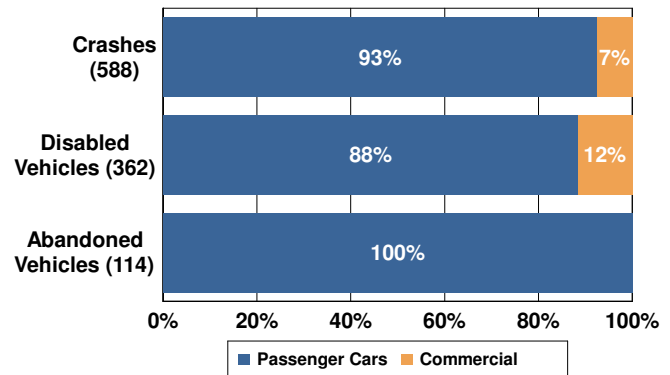
1. US-131 NB @ 28th St. (539)
2. US-131 NB @ 36th St. (472)
3. US-131 SB @ Ann St. (330)

*Number of unique event messages.

Incident Managed by Type

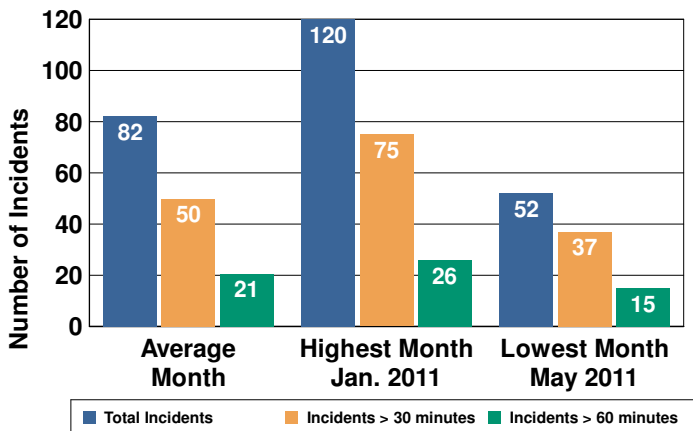


Vehicle Composition of Incidents



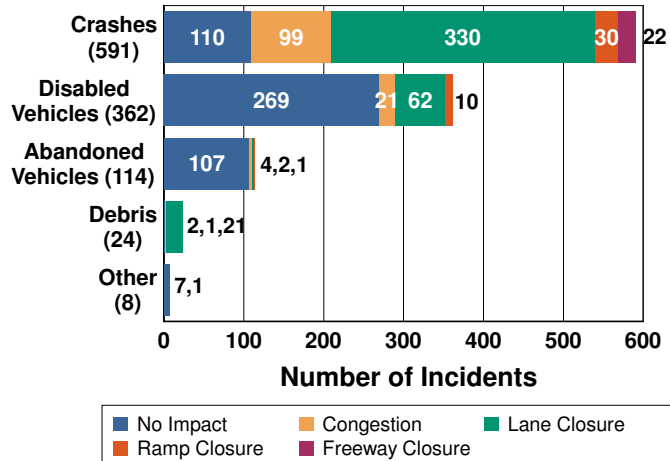
*Vehicle Composition of Incidents excludes incidents where vehicle types were not identified.

Incident Duration History*

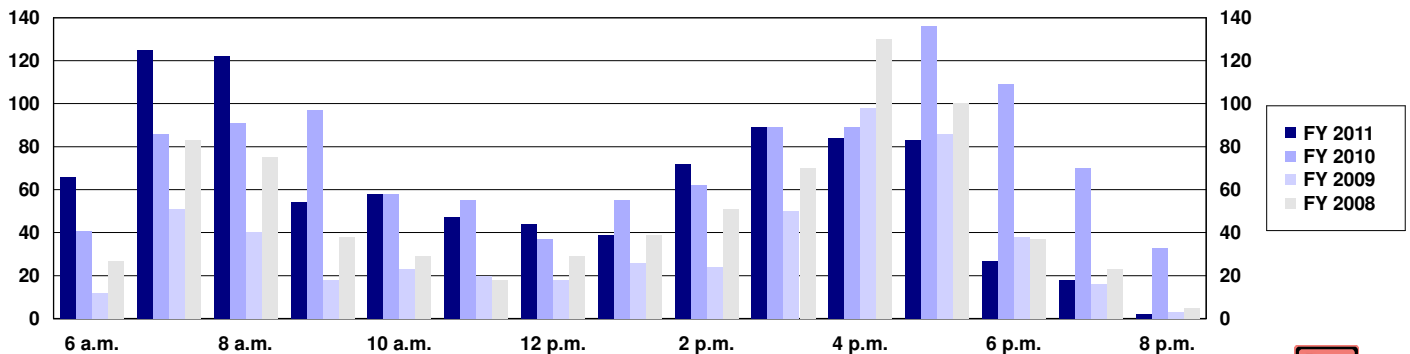


*Incident Duration History excludes abandoned vehicles.

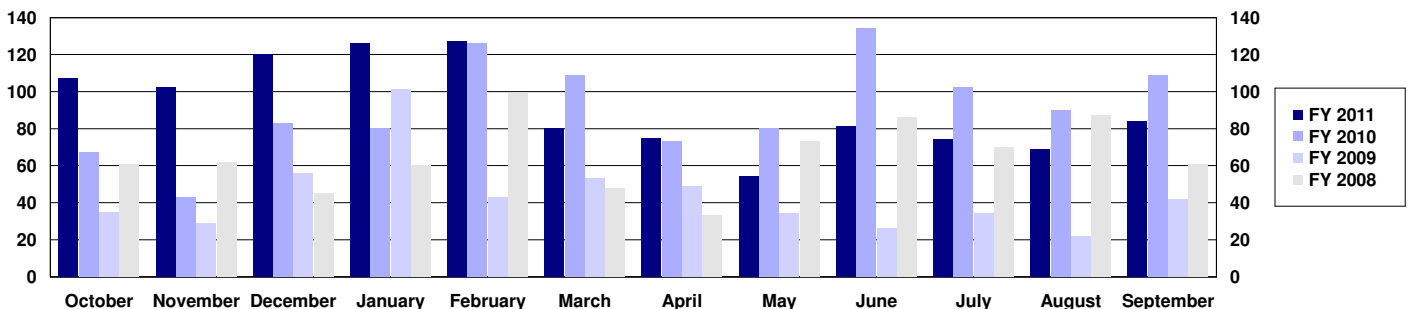
Traffic Impacts by Type



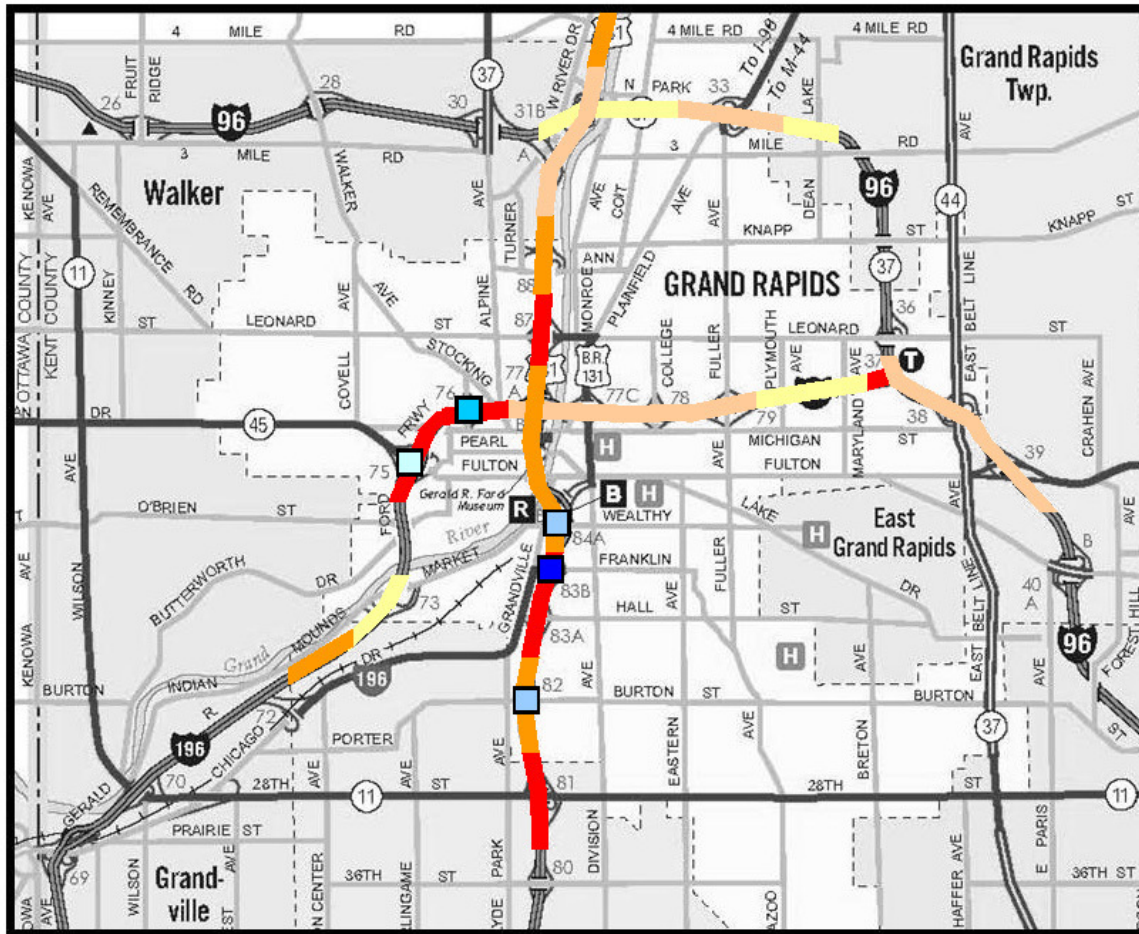
Total Unplanned Incidents per Weekday Hour



Total Unplanned Incidents per Month



Incident Density and Hot Spots Map



Segments:

0 - 19	20 - 39	40 - 59	> 60	(incidents/mile)
[Yellow]	[Light Orange]	[Orange]	[Red]	

Hot Spots:

50	39	38	35	(crashes)
[Dark Blue]	[Light Blue]	[Medium Blue]	[Lightest Blue]	

High-Impact Unplanned Incident Activity*



Incident	FY 2011			FY 2010		
	Average Month	Highest Month Jan. 2011	Lowest Month Dec. 2010	Average Month	Highest Month Sep. 2010	Lowest Month Apr. 2010
Lane Closure	34.6	52	22	23.2	43	13
Ramp Closure	3.4	6	3	2.8	4	1
Freeway Closure	1.9	7	2	1.8	2	2

*High-impact Unplanned Incident Activity includes unplanned incidents resulting in closures.

Unplanned Incidents by Roadway

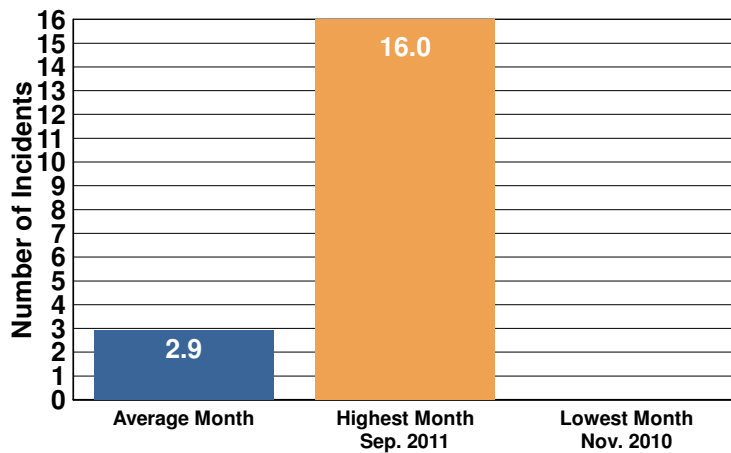


Freeway	FY 2011						FY 2010					
	Average Month		Highest Month Jan. 2011		Lowest Month May 2011		Average Month		Highest Month June 2010		Lowest Month Nov. 2009	
	Total	per mi.	Total	per mi.	Total	per mi.	Total	per mi.	Total	per mi.	Total	per mi.
I-96 (4.5 mi.)*	11	2.4	19	4.2	5	1.1	13	3.0	16	3.6	6	1.3
I-196 (8.5 mi.)*	23	2.7	33	3.9	11	1.3	18	2.1	13	1.5	12	1.4
US-131 (11 mi.)*	56	5.1	72	6.5	37	3.4	58	5.3	103	9.4	23	2.1
Total	89	3.7	124	5.2	53	2.2	89	3.7	132	5.5	41	1.7

* Reflects roadway mileage within the current WMTOC camera coverage area.



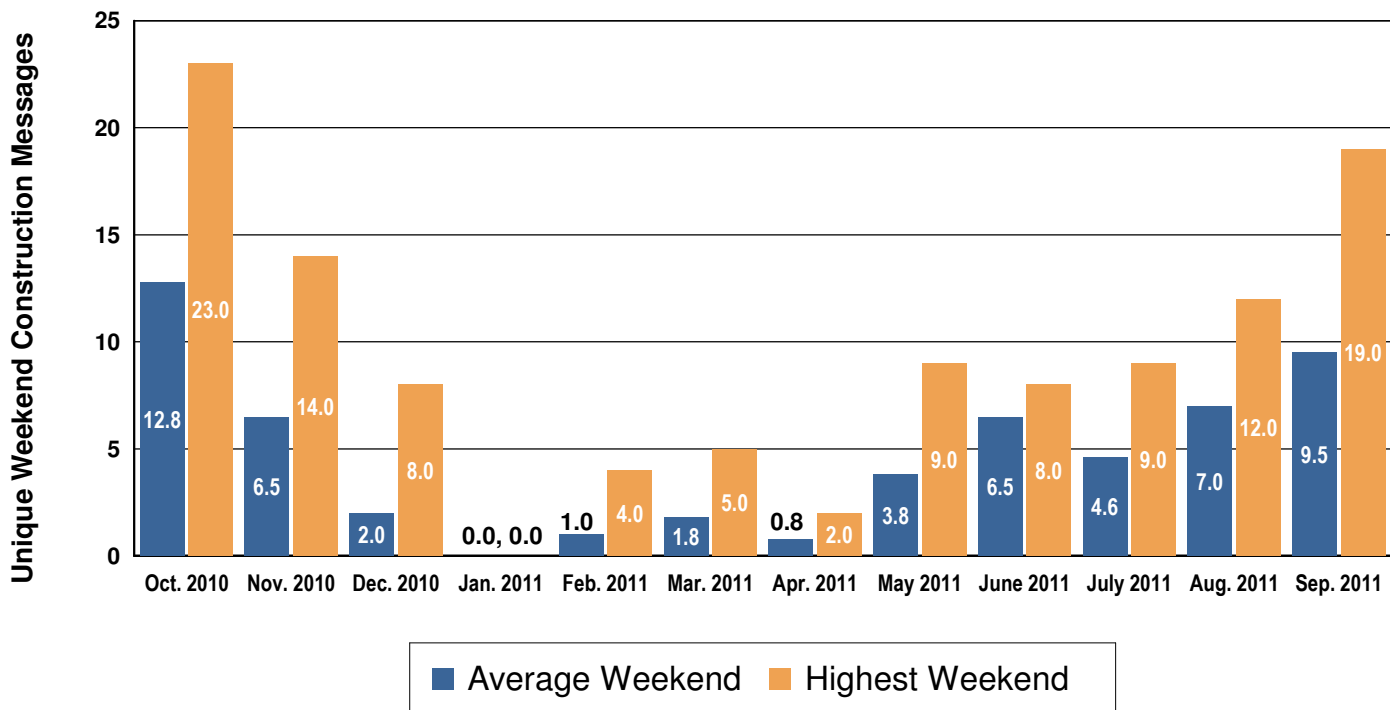
Incidents Occurring in Work Zones



Highest Month Work Zone Incident Details:

During the month of September, 16 incidents were identified by operators as being within work zones. Four crashes occurred on southbound US-131 and three crashes occurred on northbound US-131 within the Burton Street and Hall Street bridges work zone. Two crashes occurred on westbound I-96 within the Cascade Road ramp reconstruction work zone. One crash occurred on eastbound I-196 and two crashes occurred on westbound I-196 within the I-196 (Grand River to Lake Michigan Drive) work zone. Three crashes occurred in short-term work zones. There was a disabled semi in the US-131 bridge replacement work zone at 36th Street.

Weekend* Construction DMS Message Activity

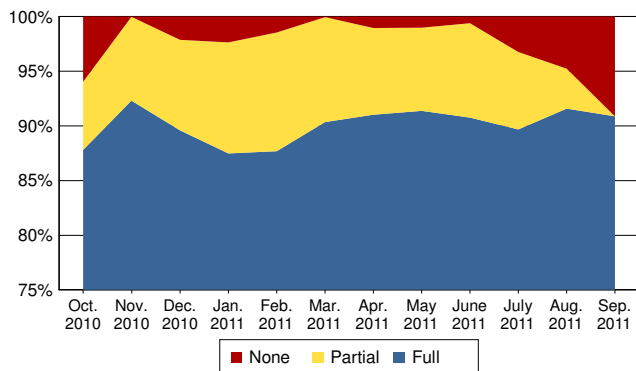


* Friday, Saturday and Sunday.

Construction Activity



Overall CCTV Camera Availability

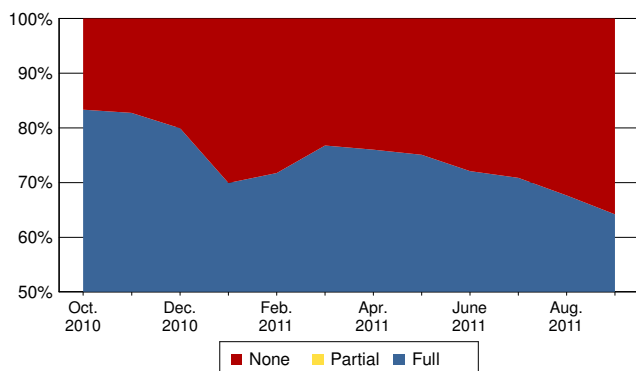


Individual CCTV Camera Availability



CCTV Cameras Below 98% Availability			
Location	Full	Partial	None
1. US-131 @ Wealthy St.	7%	74%	18%
2. I-96 Conn. to US-131	10%	84%	6%
3. US-131 @ 28th St.	77%	23%	-
4. I-96 @ E. Beltline Ave.	87%	-	13%
5. I-96 @ M-21 (Fulton St.)	91%	-	9%
6. I-96 @ I-196	96%	-	4%
7. US-131 @ Hall St.	96%	1%	3%
8. I-96 EB @ Plainfield Ave.	97%	-	3%
9. I-96 WB @ Plainfield Ave.	97%	-	3%
10. I-196 @ Fuller Ave.	97%	1%	2%
11. I-196 @ Lake Michigan Dr.	98%	-	2%
12. US-31 @ M-104	98%	2%	-
13. US-131 @ I-96	98%	1%	1%

Overall MVDS Availability

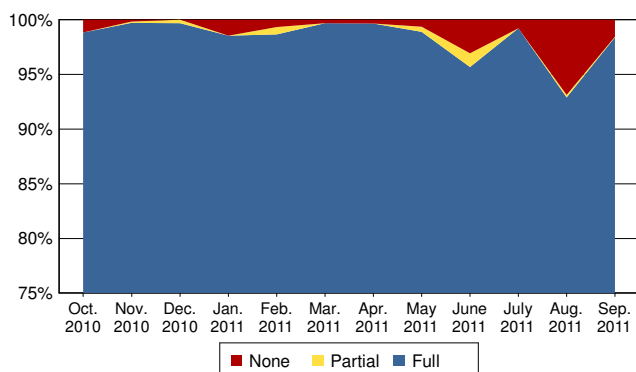


Individual Detector Availability



MVDS Below 90% Availability			
Location	Full	Partial	None
1. 114N - I-196 @ Monroe	-	-	100%
2. 114S - I-196 @ Ottawa	-	-	100%
3. 119 -	-	-	100%
4. 205 - US-131 NB N of 28th	5%	-	95%
5. 201 - US-131 NB S of 36th	11%	-	89%
6. 204 - US-131 NB S of 28th	15%	-	85%
7. 125 - I-96 @ E. Beltline	18%	-	82%
8. 220 - I-196 @ US-131	24%	-	76%
9. 229 - US-131 @ I-96	38%	-	62%
10. 224 - US-131 @ Ann	49%	-	51%
11. 227 - US-131 @ I-96	52%	-	48%
12. 120 - I-196 E of Fuller	65%	-	35%
13. 124 - I-196 @ I-96 Merge	69%	-	31%
14. 113 - I-196 @ US-131	78%	-	22%
15. 226 - US-131 @ I-96	83%	-	17%
16. 116 - I-196 W of College	85%	-	15%
17. 115 - I-196 @ Ottawa	85%	-	15%
18. 213 - US-131 S of Wealthy	88%	-	12%
19. 230W - I-96 @ US-131	88%	-	12%

Overall DMS Availability

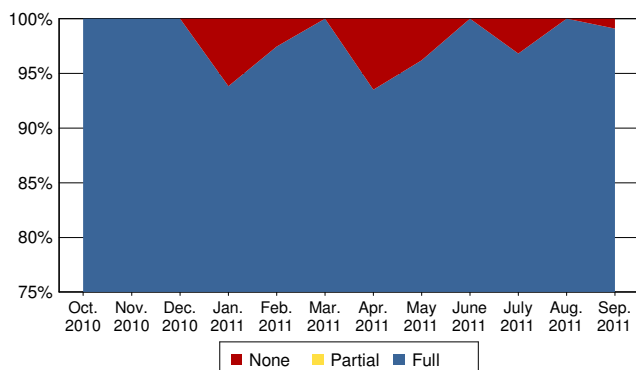


Individual DMS Availability



DMS Below 98% Availability			
Location	Full	Partial	None
1. I-96 WB @ Quiggle Ave.	91%	1%	8%
2. I-196 WB @ Plymouth Ave.	95%	1%	4%
3. I-96 WB @ M-21 (Fulton St.)	96%	1%	3%
4. US-31 @ Broadway Ave.	98%	1%	1%
5. US-131 NB @ 36th St.	98%	-	2%

Overall VSS Availability



Individual VSS Availability



VSS Below 98% Availability			
Location	Full	Partial	None
1. Market SB Speed Limit	97%	-	3%
2. Pearl SB Speed Limit	98%	-	2%

